DOCUMENT RESUME

ED 087 770 SP 007 756

| | |
|---|---|
| AUTHOR | Hamilton, Phyllis D. |
| TITLE | Competency-Based Teacher Education. Research Memorandum EPRC 2158-19. |
| INSTITUTION | Stanford Research Inst., Menlo Park, Calif. Educational Policy Research Center. |
| SPONS AGENCY | Office of Education (DHEW), Washington, D.C. Office of Planning, Budgeting, and Evaluation. |
| REPORT NO | MR-EPRC-2158-19 |
| PUB DATE | Jul 73 |
| CONTRACT | OEC-0-72-5016 |
| NOTE | 75p. |
| EDRS PRICE | MF-$0.65 HC-$3.29 |
| DESCRIPTORS | *Educational Legislation; *Educational Policy; Federal Legislation; *Government Role; *Performance Based Teacher Education; Policy Formation; State Legislation; *Teacher Education |

ABSTRACT

This paper identifies critical issues of performance-based teacher education (PBTE), relates them to influences on policies for educational professions, and makes recommendations for future action by the U.S. Office of Education (USOE). The rapid growth of PBTE is creating unrealistic expectations for educational reform which may prematurely destroy its potential. Although PBTE is promoted as a radically different form of teacher education, it is not significantly different from previous methods. PBTE's problems are a combination of (a) lack of knowledge of the relationship of teacher behaviors to pupil outcomes and (b) problems inherent in instruction and evaluation, design and management by consortia, humanist reaction, certification procedures, premature legislation, organized opposition, and development and operating costs. It is recommended that USOE take immediate steps to moderate claims of widespread educational reform through PBTE and discourage premature legislation for competency-assessed certification. Long-term recommendations are that USOE (a) fund a comprehensive analysis of PBTE, (b) establish a policy group to advise Federal teacher education planners, (c) promote research on teacher effectiveness and social factors affecting child learning, (d) compare the cost effectiveness of PBTE with alternate models, (e) inform the public of the complexities of educational policy making, and (f) clarify national goals as they relate to future teacher training needs. (Author/HMD)

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STANFORD RESEARCH INSTITUTE
Menlo Park, California 94025 · U.S.A.

ED 087770

*SRI Project 2158*

*July 1973*

*Educational Policy Research Center*

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*Research Memorandum*

*EPRC 2158-19*

# COMPETENCY-BASED TEACHER EDUCATION

*Prepared for:*

OFFICE OF PLANNING, BUDGETING AND EVALUATION
U.S. OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

CONTRACT OEC-0-72-5016

SP007 256

## PREFACE

The Office of Planning, Budgeting and Evaluation in the U.S. Office of Education has commissioned this study of a movement toward accountability in teacher training known as Competency-Based Teacher Education (CBTE).

The research was originally planned to investigate the federal role in preparation of teachers for the educationally disadvantaged. However, Dr. Harry V. Kincaid, project leader, decided early in the study to concentrate on CBTE primarily because of the extravagant claims being made for its potential to reform teacher preparation. This basic theme was presented orally to the Office of Education at a site visit to the Educational Policy Research Center in October, 1972. EPRC was subsequently asked to prepare this paper which is an elaboration and documentation of the basic theme. The work was performed by Dr. Kincaid and Phyllis D. Hamilton. The major part of the investigation was conducted during the period from October through December 1972.

The body of evidence which forms the basis of this report was accumulated from (1) traditional literature sources and research evidence, (2) observations of training programs and conferences, and (3) interviews with directors of training programs, student teachers, public school teachers, legislators, researchers, members of professional associations, and concerned government officials.

The research team is grateful to Dr. Michael Kirst, Associate Professor of Education and Business Administration at Stanford University, and to Dr. James Guthrie, Associate Professor of Education at the University of California at Berkeley, for their careful reviews of the contents of this paper.

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## SUMMARY

This policy paper is designed to (1) bring together the critical issues involved in CBTE, (2) relate them to significant trends that are likely to influence future policies for the education professions, and (3) suggest recommendations for future action.

The rapidity with which the movement has spread suggests the need for caution. CBTE is being oversold by USOE and creating unrealistic expectations for widespread educational reform that could prematurely destroy the movement's potential. A comparison with historical antecedents discloses that although CBTE is often promoted as a radically different form of teacher education, in reality the differences are neither major nor do they represent a radical departure from what has been tried before.

The lack of knowledge regarding the relationship of teacher behavior to pupil outcomes is CBTE's greatest problem. There are other problems inherent in: instruction and evaluation, design and management by consortia, humanist reaction, certification procedures, premature legislation, organized opposition, development and operating costs, and exportability.

Careful consideration must be given to the federal role in the CBTE movement; indications are that far more problems than promise lie ahead if the present course is followed. Therefore, the following recommendations are made to USOE:

Immediate steps

(1) Moderate claims made for widespread educational reform through CBTE.

(2) Discourage premature legislation for certification based on demonstrated outcomes with pupils.

Long Term Planning

(1) Apply funds to a comprehensive analysis of CBTE while keeping present developmental projects intact.

(2) Establish an independent policy panel to function as an advisory group to federal planners for teacher education

(3) Promote research on teacher effectiveness as well as on social and environmental factors that impinge on child learning

(4) Coordinate knowledge from federal programs that have a teacher training component.

(5) Examine alternative models to CBTE in relation to cost-effectiveness

(6) Communicate with the public regarding the complex realities of the educational and policy-making process

(7) Consider the future societal context and its implications for training teachers.

(8) Clarify national educational goals as they relate to future teacher training needs.

# I INTRODUCTION

> Federal efforts in education should be governed by policy, not by the inclinations of each new person assigned responsibility for an agency or program. On occasion, changes in a course of action are inevitable. But unnecessary changes will be kept to a minimum if policies are worked out thoroughly when a program is inaugurated, and if those advocating a new direction are required to provide a rationale more compelling than that which governs existing practice.[1]

The lack of a comprehensive policy carefully worked out prior to a program's inauguration appears to have contributed to the failure of many educational reforms. Whatever the reasons for this lack--too little time, hasty reactions to political pressure, optimistic belief in an untested program's efficacy--the fact remains that federal efforts at educational reform have not been based on the "compelling rationale" that could have emerged from systematic policy research.

In the continuing--and sometimes desperate--search for new approaches to innovation and reform, the spotlight of educational accountability has inevitably come to focus on institutions of teacher training. Competency-based teacher education (CBTE) has emerged in response to this search and is currently taking on some of the dimensions of a major reform. The U.S. Office of Education has been investing heavily in developing and disseminating CBTE, programs are operating at colleges of teacher education, states are legislating on the basis of CBTE procedures, and the literature is proliferating.

Few would dispute the importance of the type of preparation the nation's teachers receive:

> Clearly, the manner in which educational personnel are trained will have a profound effect on the philosophy, curriculum--indeed, the whole nature of the education received by the students whom these personnel serve.[2]

What is a matter of serious debate, however, is the application of the concept of accountability in the form of competency-based teacher education.

Inherent in the CBTE movement is a set of complex issues that make precise analysis difficult. This paper describes these issues in some detail and also relates them to significant trends that are likely to influence future policies for the development of the education professions; e.g., educational technology, consumerism, teacher militancy, financial constraints, teacher supply and demand. Hopefully, the conclusions reached as a result of this analysis will be useful in the formulation of a more comprehensive federal policy regarding CBTE.

## Potential Scope of the CBTE Movement

The significance and potential scope of the CBTE movement is illustrated by some data on the rapid growth in both the size and complexity of the educational system during the past decade. From 1960 to 1970, for example, total enrollment in public elementary, secondary, and higher education grew by one-third, from some 45 million to 60 million. During the same period, a parallel increase was seen in the growth of the education professions: the total instructional staff at all levels of education grew from fewer than 2 million in 1960 to well over 3 million in 1971, surpassing the growth rate of the total labor force and the professional and technical labor force as well.[3]

When one considers these figures in relation to the fact that some CBTE advocates are envisioning reform of the total educational system through CBTE, one gets an appreciation for the magnitude, if not the clarity, of that vision.

To date, leaders in the CBTE movement have been focusing on student teachers in preservice training; in the main, inservice training for classroom teachers has been limited to that required for their function as supervising trainers. Therefore, this report considers CBTE primarily in relation to students enrolled in colleges of teacher education although implications of the competency-based approach for experienced classroom teachers are also discussed.

Since this research relates its findings to federal priorities, it has concentrated on the elementary school where educationally disadvantaged children continue to be a major national focus. In 1972-73, a total of 1,122,103 classroom teachers were employed in the nation's public elementary schools; they taught throughout 16,653 operating school districts.[4] At the beginning of the 1972-73 school year, almost 125,472 prospective elementary school teachers had completed their preparation, but only about 51,800 teaching positions were open to them. At the same time, however, 23 states reported critical shortages of teachers in special assignments directed to educationally disadvantaged children.[5]

## Definition of CBTE

It has been said that it's far easier to defend the need for CBTE than to define CBTE.[6] When the confusion of diverse terminology[7] found in the literature has been cut through, the competency-based approach can be defined as one which specifies objectives in explicit form and holds prospective teachers accountable for meeting them. Teacher competencies and measures for evaluating them are specified and made known in advance of instruction.

Competency-based programs are criteria referenced and thus provide information as to the degree of competence attained by a particular student teacher, independent of reference to the performance of others. Competencies may be developed and assessed on three types of criteria:

- Knowledge--facts, principles, generalizations, awarenesses, and sensitivites that the student teacher is expected to acquire.
- Performance--behaviors that the student teacher is expected to demonstrate.
- Consequences--outcomes that the student teacher is expected to bring about in the emotional and intellectual growth of his pupils.

Beyond this basic definition, there is confusion even among the disciples of the movement as to what constitutes a CBTE program. Most would agree, though, that a program is competency-based if it possesses the following characteristics:

- Individualized instruction--the student teacher is involved in making instructional choices that he considers relevant to his own interests.
- Instructional modules--a module is a unit of learning consisting of a set of activities intended to help a student teacher achieve specified objectives.
- Time as a variable--completion of modules and rate of progress through the program are detemined by the student teacher's competency rather than by the traditional requirement of course completion in a fixed time span.
- Field-centered instruction--because of the emphasis on performance in real settings with pupils, there is more and earlier practice teaching.
- Emphasis on exit rather than entrance--while program admission requirements are less rigid, demonstration of competency is required for certification.

Two major procedural conditions should exist if the program is approaching the ideal CBTE model: (1) a systems approach, and (2) decision-making by "consortia." The systems approach deals with integration of subsystems and components, e.g., delivery systems, management support subsystems for records and accountability, feedback to guide the learning experience. The word "consortia" implies that decisions about the design

and operation of the teacher training program are made by various participants and interested parties (e.g., students, faculty members, public school teachers, spokesmen for professional organizations, and lay citizens).

## Recent Development of CBTE

No comprehensive history of the CBTE movement has yet been written, but when and if it is, no doubt it will point out that CBTE in the 1970s is primarily an outgrowth of the accountability movement in education. Hence, CBTE is in part a response to the public discontent that marked the decade of the 1960s, and reflects the increasing federal emphasis on systems management.

Alleged public dissatisfaction with the educational system has been described so extensively that it hardly bears reiterating here in any detail. The alarm generated by Sputnik in 1958, the increasing concern in the succeeding years over the inability or failure of the public schools to teach children to read, write and speak effectively, the need for general reform of the educational system--all of these have been given extensive treatment both in the popular press and in the professional literature. A vocal minority at least has written voluminously about the public's unhappiness with the educational malaise of the American schoolhouse. And reform writers such as Kozol and Kohl have clearly laid the blame at the teacher's classroom doorstep. As Broudy describes it:

> The public was told that teachers oppressed and murdered children (at least in spirit), and that the public school, like God, was dead. Throughout the decade the villain remained the same--the mindless teacher allegedly produced by mindless education professors at mindless schools of education.[8]

At the same time, there has been an increasing tendency in the federal government to view the heavily funded curricular reforms of the 1960s as failures and to look to teacher training as the new vehicle for reform:

> The sad fact is that none of these programs has made much of an impact; none has been effective in equalizing, individualizing, or humanizing instruction. The Education Professions Development Act is an acknowledgement that we put the cart before the horse. The Act says, in effect, that none of the new education measures, no matter how meticulously designed, how noble in intent, or how expensively financed, can be effective without people prepared to make them effective. It says that the only way we can bring about change in education is by bringing about change in the people who operate the schools and colleges.[9]

The political response to the perceived failures of the curricular reforms has been an increasing focus on fiscal issues and education through systems management. As budget agencies have become the target of political action, educators have increasingly incorporated the efficiency techniques of industry: evidence the widespread introduction of Program Planning and Budgeting Systems (PPBS) and Performance Contracting, for example. This trend is presumably responsible to an irate public's discontent as expressed by the voters continuing to turn down school finance issues. The move to systems management reflects high expectations that the methods of the business world will solve problems and cut costs.

These expectations are reflected in the design of CBTE which evolved from the Elementary Teacher Training Models project. In October 1967, the USOE Bureau of Research issued a request for proposals to develop specifications for models of elementary teacher training with the requirement that they incorporate (1) behavioral objectives and (2) a systems analysis approach. By the target date of January 1, 1968, 80 such proposals had been received.

Nine institutions were selected to participate in a Phase I design stage; a tenth institution was added in the Phase II feasibility effort completed in 1970.[10] A change of leadership and a shortage of funds in the Bureau of Research, however, meant that the third and most critical stage--demonstration--was never implemented. Thus, in 1970, the Models

project was transferred to the Bureau of Education Professions Development (BEPD).[11]

Responsibility for development went to an internal BEPD group--Task Force '72--established in the fall of 1970 to study promising directions in the education professions field. In March 1971, the Committee on National Program Priorities in Teacher Education was formed to represent the educational community outside of the federal government. Since that time, these two groups have worked closely together to further develop the CBTE approach.

## II CURRENT STATUS OF THE CBTE MOVEMENT

### The Federal Perspective

USOE has high expectations for the CBTE movement. As early as 1969 and prior to completion of the Phase II feasibility stage of the Models Project, Associate Commissioner Don Davies clearly expressed a USOE strategy to fund only those federal programs incorporating a competency-based approach:

> ...Federal programs for meeting educational manpower needs under the Education Professions Development Act will be funded only if they can be evaluated on the basis of performance. The essential element in evaluation will no longer be the means by which educational personnel are trained but the effectiveness of the learning that takes place as a result of that training... Accountability will be the hallmark of progress. Teacher-training institutions and local school systems will be accountable to the community for the quality of educational services delivered, and teachers will be accountable for what children learn.[12]

CBTE fits. It fits the federal perspective in many ways. CBTE is consistent with the trend to accountability and systems management in both government and education. Since it is often promoted as a radical innovation, it fits the federal emphasis on educational reform. Some advocates, in fact, are making claims for improving the entire educational system through CBTE:

> CBTE represents a complete overhaul in our approach not only to teacher preparation but to the teaching-learning relationship, to the whole educational enterprise.[13]

> CBE is rapidly becoming the most significant lever for educational reform since Sputnik, and there is great need for widespread and direct communication about its nature and potential.[14]

This hope for large scale reform appears to underlie the efforts of the National Center for the Improvement of Educational Systems (NCIES--formerly BEPD). Evidence of this expectation is found in the final report of the Committee on National Program Priorities in Teacher Education,[15] which advocates a five-year crash program that would convert the entire U.S. system of teacher preparation to CBTE. The year-by-year accomplishments hoped for by this committee are as follows:

Year One - Create 100 training complexes in the ten largest metropolitan areas. Built around major universities, each complex would produce about 150 teachers a year.

Year Two - Increase to 400 training complexes.

Year Three - Increase to 900 training complexes.

Year Four - Increase to 2,000 training complexes.

Year Five - Increase to 3,000 training complexes. Output would be equivalent to the then current requirements for teachers.

The Committee claims that what is required "is an organized effort of unprecedented proportions for educators parallel...to what has been done in industry and the military." The cost of this effort would approximate $115 million for the first year, building to $4.5 billion in the fifth year.[16]

## Relationship to Other Programs and Priorities

Within NCIES, there have been five developmental thrusts: (1) protocol materials, (2) training materials, (3) training complexes, (4) performance-based certification, and (5) the Elementary Models. Task Force '72, in fact, has been studying the relationships among the five priorities with a view to presenting an integrated program for future development. CBTE is believed to have the greatest leverage for change, since it has the potential for interrelating the essential features of all five endeavors.

Within the operational NCIES field programs that have been funded under EDPA,[17] the Teacher Corps has been most prominent in CBTE development. In 1970, USOE committed the entire Teacher Corps funding for the next five years to universities utilizing competency-based programs and to school systems that employ corps trainees. At present 2,600 corpsmen are serving in 138 school districts, while studying in 78 universities. Teacher Corps programs are located in 36 states, Puerto Rico, and the District of Columbia. For fiscal year 1973, in addition to the Teacher Corps, both the Urban/Rural and Career Opportunities programs are being asked to incorporate the competency-based approach, reflecting USOE's expectation that CBTE will actually integrate the five developmental thrusts in the operation of these programs.

In the meantime, little evidence can be found of coordination between the competency-based movement and another important, but little advertised, NCIES program created through the Education Amendments of 1972--Undergraduate Preparation of Teachers (UPEP). UPEP marked the first congressional support of regular undergraduate programs for prospective teachers; the NCIES programs[17] have been primarily geared to advanced training. Central to the UPEP approach is the explicit involvement of the Arts and Science faculties in the undergraduate preparation of teachers; its focus is on cultural pluralism and training teachers for the disadvantaged.[18] As with CBTE, the objects of reform are institutions of higher education and the public schools. But UPEP and CBTE appear to have developed independently of each other, when active coordination might have increased the effectiveness of both.

## Activities Supported by USOE

The U.S. Office of Education has demonstrated its commitment to the competency-based approach to teacher education by its support of numerous other related activities throughout the nation. Table 1 lists these

Table 1

CBTE PROJECTS, BY TYPE OF ACTIVITY AND USOE EXPENDITURE[19]

| Project/Group | Type of Activity | Total USOE Expenditure (August 1967 to January 1973) |
|---|---|---|
| Elementary Teacher Education Models (research) | Phase I planning; Phase II feasibility studies to design 10 new models of teacher education | $ 3,000,000 |
| National Consortium of CBTE Developers (Teacher Corps) | Directors of Models Project currently focusing on development; providing leadership | 250,000 |
| Southern Consortium (Teacher Corps) | Developing local models and disseminating them to small colleges interested in CBTE | 50,000 |
| Multi-State Consortium (Title V, ESEA) | Studying implications of state certification and training programs; developing management systems | 50,000 |
| Leadership Training Institute (NCIES) | Developing teacher centers (now renamed CBTE Centers) at sites of Model Project Directors; developing materials | 200,000 |
| Task Force '72 (NCIES) | Promoting "national dialogue" on CBTE; disseminating information; assisting in program implementation | 1,900,000 |
| Committee on National Program Priorities (research) | Developing five-year national CBTE program | 60,000 |
| Texas State Project (NCIES) | Developing statewide implementation of CBTE | 1,500,000 |
| The Committee on Performance-Based Teacher Education (NCIES) | American Association of Colleges for Teacher Education serving as clearinghouse of information | 400,000 |
| Teacher Corps Program Development Specialists | Teacher Corps staff development and implementation of CBTE component | 4,000,000 |
| Technical Assistance | Special projects with Teacher Corps; national and regional conferences | 800,000 |
| | | $ 12,210,000 |

activities with the approximate size of the USOE investment. From the initial planning stage of the Elementary Models project in August 1967 until the present time (January 1973), these USOE expenditures total $12,210,000.

As shown in Table 1, although much of the USOE-sponsored activity centers on further basic development of the CBTE approach, a large share is devoted to dissemination and promotion. For example, three conferences devoted to CBTE planning have been sponsored by USOE:

| | |
|---|---|
| Tallahassee, Florida | 1970 |
| Houston, Texas | 1971 |
| Fredonia, New York | 1972. |

A series of eight regional conferences sponsored by AACTE/Teacher Corps/NCIES have been held around the nation to plan and promote the adoption of CBTE programs on a national scale:

| | |
|---|---|
| Washington, D.C. | September 12, 1972 |
| Salt Lake City, Utah | November 2-3 |
| St. Louis, Missouri | November 27-28 |
| St. Louis, Missouri | November 30-December 1 |
| Dallas, Texas | January 3-9, 1973 |
| Atlanta, Georgia | March 12-13 |
| Boston, Massachusetts | April 9-10 |
| San Diego, California | May 14-15. |

The primary dissemination arm of the CBTE movement is the American Association for Colleges of Teacher Education (AACTE). Here, the Committee on Performance-Based Teacher Education, formed in 1970, serves as a clearinghouse of information. In addition to the AACTE committee, numerous other operating groups are receiving funding from the U.S. Office of Education for various types of development and dissemination activity, e.g., three different consortia and a leadership training institute.

In 1972, when USOE funding was not available, the Rockefeller Foundation provided a grant of $300,000 to the Educational Testing Service for

planning a National Commission on Performance-Based Education. A second proposal[20] for implementing the planned Commission was submitted to the Foundation in February 1973. Unfortunately, the funding requested (about $175,000) will not cover the planned R&D Task Force. Rather, it is hoped that members of the Commission will be able to raise funds for R&D from other sources, as yet undetermined.

State Activities

About seventeen states have either passed legislation or received administrative support for certification based on the CBTE doctrine; fourteen others are actively working on new certification standards.[21] The Master Plan endorsed by the New York State Regents, for example, calls for development of a total competency-based approach to certification and recertification by the year 1990.[22]

Professional Associations

Agencies representing public school teachers have also been active in the CBTE movement. Sessions on CBTE have been the focus of all 1971-72 NEA regional seminars. Both the American Federation of Teachers (AFT) and the United Federation of Teachers (UFT) have appointed study commissions and the latter has prepared a position paper. The American Association of School Administrators has also appointed a study commission. State associations, such as the California Council on the Education of Teachers, are considering the implications of CBTE at their association meetings.

School Districts

At the local district level, little information is available about the extent to which CBTE has been introduced. Certainly, in view of the federal requirement that all Teacher Corps programs have a CBTE component,

one would expect that the 138 school districts currently employing Teacher Corps trainees are developing CBTE procedures.

## Visibility in the Literature

The result of all this activity has meant increasing visibility for the CBTE movement. Prior to 1970, few articles bearing on the subject appeared in the professional journals of teacher education. Since that time, however, the literature has been proliferating. The AACTE committee has produced a series of eight papers dealing with selected aspects of CBTE; at least four books have been published.[23]

June of 1972 saw the first publication of a monthly CBTE newsletter,[24] one of the activities of the Multi-State Consortium on CBTE referred to above. Although the initial distribution of the newsletter was primarily to the participating states, the editor now reports a circulation list numbering 8,000.

To date, CBTE has received relatively little attention in the public press although the New York State Master Plan, endorsing the development of a total CBTE approach to teacher education by the year 1990, has achieved a certain amount of notoriety.[25]

## Programs in Operation

It was not possible to obtain information on how much USOE funding has been granted to institutions of higher education specifically for developing CBTE programs. Neither is it possible to identify the extent to which program developers at such institutions have responded for fiscal reasons and political expedience rather than from deep-seated beliefs in the efficacy of the CBTE approach. After observing 17 CBTE programs, an AACTE study group had this to say:

> In all but two programs, there was some indication of support from government authorities, either in funding or in the provision of technical assistance in the form of consultants, materials, and also physical plant facilities.[26]

Initiators of CBTE programs were said to be "internal agents, faculty members who had a direct, preexisting relationship with powerful college administrators and who also had secure tenure."

As discussed at a regional CBTE conference held in Salt Lake City, educators can be classified along the following continuum in terms of their attitudes to CBTE:

- Against it
- Not interested
- Watching and waiting
- Jumping on the bandwagon
- Displaying serious interest
- Adopting strategy in principle, have pilot program
- Convinced it is a viable alternative, but have other programs
- Convinced CBTE is the only way.[27]

The actual number of programs currently in operation around the nation is a matter of debate and perhaps philosophy toward the CBTE doctrine. Since CBTE appears to be a conglomerate of many ideas and approaches, no one appears willing to say how many of these ideas must be incorporated before the program can be called a true CBTE approach.

The AACTE has sent a questionnaire to its entire membership of 846 colleges (said to produce about 80 percent of the nation's teachers) and to non-member institutions--a total of 1,246. Of the approximately 700 responses received to date, 366 indicate they are either operating, developing, or planning CBTE type programs.[28] It is assumed that no institution is at present operating a CBTE program in its ideal form, although exemplary programs such as that at Weber State are frequently mentioned. Institutions whose whole college of education is involved in the CBTE approach include:

Florida International University
Northern Florida University
Saint Scholastia College
Southern Consortium Colleges
Southwestern Minnesota State University
Toledo University
Weber State College.

Institutions having CBTE as well as alternative programs include:

Brigham Young University
Florida State University
Michigan State University
State College of New York
Syracuse University
University of Florida
University of Georgia
University of Houston
University of Massachusetts
University of Pittsburgh
University of Texas
University of Utah
University of Washington
Western Washington State University.

Directors of CBTE programs at these colleges report an influx of visitors and a myriad of requests for information. For example, in 1972, Weber State College, a small school with an education faculty numbering about 15, reported four to five hundred visitors and an even larger number of inquiries about its program. Directors are trying to be responsive by disseminating the limited amount of information they have available on their own programs.

Interviews with program directors reflect some confusion and uncertainty regarding CBTE's operation; at the same time the directors express cautious optimism about its potential. Some feel the biggest deterrent to the success of the movement may well lie in the unrealistic expectations that surround it. Many decry the absence of a federal commitment to basic research on CBTE, claiming that USOE went too quickly from the design stage in the Bureau of Research to development and dissemination in NCIES.

## III CRITICAL ISSUES

The majority of those associated with the CBTE movement are quick to admit that the greatest weakness of the CBTE approach is the inadequate base of knowledge upon which it rests. But there are several other crucial issues sometimes ignored in the present enthusiasm for CBTE. These issues range from a philosophic debate between behaviorists and humanists to a paucity of information about costs, and are discussed in the pages that follow.

### Theoretical and Research Base

In the absence of empirical evidence about teaching effectiveness, confusion exists among CBTE developers as to what criteria can and should be employed in specifying objectives and developing competencies--teacher knowledge, teacher performance, or pupil outcomes?

Most CBTE proponents would agree that the ultimate objective of the CBTE movement is to certify teachers on the basis of demonstrated outcomes with pupils. At present, however, knowledge and actual behaviors in the classroom are most commonly used:

> CBTE is at a stage of development that would tend to be applicable in some of the knowledge and skills area. Agreement can probably be reached in those areas which have already established product consequences, or in those areas which have been hypothesized as having the highest probability of affecting pupil behavior.[29]

Hypothesizing about teacher behavior in relation to pupil outcomes, however, could mean that until these hypotheses are validated, CBTE may be certifying teachers for behaviors that may or may not make a difference

in pupil outcomes. In fact, carried to the extreme, CBTE could be reinforcing behaviors actually having undesirable consequences for pupils.

The lack of knowledge on teacher effectiveness is well documented. Rosenshine and Furst, for example, conclude from their review of current research on the subject that we know very little about the relationship between classroom behavior and student growth.[30] In a comprehensive analysis of 42 of the "best" and most conclusive studies examined in the Rosenshine review, Heath and Nielsen conclude that an empirical basis for competency-based teacher education simply does not exist.[31]

In a 1970 critique of the Elementary Models that formed the basis for CBTE, Rosenshine claimed that the empirical knowledge of teacher effectiveness was so meagre, program design was impossible or at best premature. He decried the development of such programs through "expert assertions about educational processes" rather than through the results of scientific study of the relationship between procedures and ends:

> I am concerned about the apparently limited interest in instructional research held by the developers of the models programs; the limited proposals for research in the feasibility reports...I wish that an instructional research component on teacher behavior and student growth had been built into the Models; I wish that half as many programs had been funded and the rest of the money had been devoted to systematic research on classroom instruction.[32]

Rosenshine's fear was that the development of the models would not be followed by such research and that the institutions would not develop rational procedures for validating the hundreds of teacher competencies they had developed:

> Rather, the members of teacher education institutions will believe that they are being scientific because they are using systems analysis, systematic observation, high interrater reliability, and references to Bruner, Guilford, Piaget or whatever psychologist is currently popular.[33]

This fear seems to have been realized. Research has not followed the models' development and yet hundreds of additional teacher competencies[34] are being specified without validation.

Although advocates agree that CBTE has been developed on less than an adequate research foundation, they hope to force critically needed research and development activity. In the meantime, they argue, standing still and waiting for research results means that the movement may die aborning. The question, they say, is not so much, "Are we ready?" as "Does all of the CBTE activity add up to a better approach?"

They believe that "teacher education is coming of age as a behavioral science" and that the 1970s will see CBTE programs developed on the basis of empirical knowledge about human learning. Systems theory, it is hoped, will contribute to this development and as the interdisciplinary trend gains momentum, the possibilities for a more comprehensive theory of behavior will be advanced. Yet, members of the Arts and Science faculties are reported to be generally not involved either in the established CBTE programs or in developing CBTE programs, reflecting the traditional separation of the academicians and the educators. Reminiscent of Dewey, Silberman claims that much of what is wrong with teacher education today stems directly from this separation.[35]

## Instruction

CBTE proponents also see the emphasis on more and earlier student teaching as providing effective integration of theory and practice; in one CBTE program, for example, students either live on an Indian reservation or in the inner city for one full quarter each year. Such early exposure can serve as a self-screening mechanism--student teachers may eliminate themselves early in the program, leaving only those highly motivated to teach in such environments.

An unresolved problem, however, is securing the cooperation of public schools for an influx of CBTE student teachers. Some CBTE directors report major problems of resistance from administrators and principals. Classroom teachers must receive training in CBTE methods if they are to function as supervisors of student teachers. When experienced teachers take on new roles as supervising trainers, new problems of training and cost emerge. One program director, in fact, insists that if CBTE is to succeed, incentives for public school supervising teachers must be provided; he calls for training seminars and course work for credit, with tuition fees rebated and released time arranged. School districts appear unable to afford this extra expense, yet professional associations demand it for their members.

Under the CBTE approach, instruction is individualized--student teachers must participate in designing their own programs and can progress at their own rate. But the AACTE study of 17 programs previously referred to indicates that students were often initially resistant to CBTE and unable to operate efficiently because of a lack of understanding of the program and its requirements.

Although "modules" (instructional units) often incorporate the latest instructional trends--e.g., micro-teaching, small group inquiry, simulation--developing modules that relate effectively to specified teacher competencies is noted as a weak point of the programs. And there is confusion among the CBTE developers concerning the need for modularized instruction. Some see modules as essential for personalization; others believe programs can have learning activities but call them by another name. The danger appears to be that if any program has modules, it can be called a CBTE program. In an effort to be helpful, one university has developed a "How to Write a Module" module.[36]

## Evaluation

The evaluation problem is perceived by some to be the greatest weakness of the CBTE approach:

> The overriding problem before which the others pale to insignificance is that of the adequacy of measurement instruments and procedures.[37]

If, under the CBTE approach, teachers are to be certified on the basis of demonstrated performance, it follows that evaluation measures must consist of classroom observation instruments. Simon and Boyer have compiled a 12-volume anthology of 79 observation systems,[38] most designed to focus on interacting behaviors of teachers and pupils in the teaching-learning process. Sandefur points out the paradox of the value of these systems in describing teaching behavior quantitatively in face of the lack of generally accepted criteria for what constitutes good teaching.[39] And according to Kinney the major requirement for adequacy of any measuring instrument is that the function measured be first properly defined.[40]

In a comprehensive review of these and other observational studies, Mueller claims that analysts of classroom teaching generally agree that a universal definition of good teaching pertinent to all situations and to every teacher is impossible to achieve.[41] Since therefore a universally valid instrument to measure teaching competence is not available, the alternative would seem to be the local development of a useful instrument. Such development requires enormous lead-time.

## Humanist Reaction

CBTE has further inflamed the philosophic debate between the behaviorists and the humanists. The latter fear that trivial "laundry lists" of teacher competencies may preclude the search for other types of competencies that defy precise measurement. Some feel the effort to force

all the purposes of teaching into a behavioral mold may be an impossible exercise.

Calling it "the new fetishism in teacher education," Nash claims CBTE is speaking a "quasi-mystical" language that bears little resemblance to the real world:

> Thus we hear of modules, entry and re-entry, tandem and chained schedules, differentiated staffing, mands, and tacts.[42]

He states CBTE is selling the notion that what constitutes learning is only that which is observable, demonstrable, and objectively defined.

Nash is especially concerned that we think carefully about the reaction of a new generation of students to the behaviorist orientation of CBTE. He thinks its a safe assumption that today's students are motivated by more socially altruistic purposes than their predecessors, citing evidence from a 1970 Harris poll and a 1968 Fortune study. Many students have turned to teaching with high expectations for its potential in effecting social reform, as opposed to previous generations more interested in security, status, and preservation of conservative values. CBTE, Nash says, is failing these new students.[43]

Haynes too raises the question: if graduates of a teacher education program are judged to perform adequately, is it because they perpetuate the status quo in the schools? Or is it because they are innovative and willing to search out new approaches? He believes that teacher education programs should be designed to educate creative teachers eager to do more than merely go along with the system.[44]

To some extent, these fears are being realized; directors of some CBTE programs report some of their brightest students rejecting CBTE as mechanistic and in opposition to humanistic orientations. The directors claim, however, that the CBTE approach need not make teacher training inhumane and mechanical; specification of behavioral objectives does not

preclude the attainment of other, equally important, objectives in the affective domain.

Shermis believes the teaching profession is maturing and becoming more and more precise; scientific measurement is replacing intuitive judgment:

> We believe that in the last 10 years education--that quasi-profession in the process of becoming--has invented a variety of strategies for becoming more precise....We have reached the point where it has become possible to identify the components of what has usually been held to be only an intuitive judgment--i.e., good teaching....We can use interaction analysis to help students identify specific teaching behaviors and to help evaluate such behaviors....Behavioral objectives enable students to translate highly abstract terms into concrete actions (emphasis added).[45]

The last statement is what concerns Broudy most. He claims the competency-based approach will be producing what he chooses to call "didactic" teachers--"concretely" functioning technicians for whom outcomes, means, and criteria can be made explicit. But what is needed for tomorrow's world he claims are "encounter" teachers--humanely cultivated persons for whom neither outcomes, nor means, nor criteria can be specified:

> What will be the characteristics of the encounter teacher and what will constitute good encounter teaching? Aristotle, Plato, Socrates, Jesus, and Moses were all great encounter teachers. So was my sophmore high school English teacher on one occasion, but I would be at a loss to find any personality of teaching style common to all of them.[46]

Broudy's thinking is closely aligned to Harvey's, whose work has made it clear that individuals with belief systems characterized as being more "abstract" are far more likely to possess the skills needed for tomorrow's world than persons whose belief systems are more "concrete":

> Effective coping with the new and the unexpected precludes fixity and demands, among other skills, the ability to withstand uncertainty and stress, to behave flexibly, to be committed to

openness, to avoid over-generalization and to base decisions on empirically derived information instead of certitude based on opinion.[47]

Harvey's studies point strongly toward the hypothesis that to produce open, flexible, adaptive, and creative pupils it is necessary first to have "abstract" teachers. High levels of abstraction, however, do not appear consistent with performance objectives.

Broudy believes that a significant and fairly recent development in education--emphasis on affective factors in teaching the educationally disadvantaged child--makes it clear that we must distinguish more sharply between didactic and encounter teaching. Howell, too, raises questions about CBTE in relation to ethnic minorities: are the competencies defined in CBTE programs free from discriminatory provisions?[48] Both men feel that the most important consideration in training teachers for the educationally disadvantaged are the psychosocial or "affective" factors for which we have as yet few, if any, reliable measures. In effect, both men say we know least about what counts most. The Heath and Nielsen review previously referred to confirms this; the authors found that the research examined largely ignores such important variables as socioeconomic status and race despite the persistent evidence that these variables are more important determinants of achievement level than teacher behavior.

## Design and Management by Consortia

It is a basic tenet of CBTE supporters that public school staff, training institutions, professional associations, and community groups must be involved in planning and managing programs. The consortia approach has precedents in many areas of educational problem solving. However, this condition of broad-based decision making is an extremely difficult one to achieve, calling for major shifts in role definitions,

values, attitudes. Experience in effecting such behavioral change en masse is limited. Can basic value conflicts between such divergent groups as community control advocates and teacher organizations, humanists and behaviorists, be resolved through the consortia approach?

According to Michael Kirst, the value issues will become intensely political:

> These groups have different value perspectives between each other and within their own membership. CBTE is unlikely to have a research base that will resolve many value issues through empirical data. Consequently, value issues will become intensely political, engendering negotiations, bargaining, coalitions, and compromises.[49]

The outcome of this political activity, Kirst claims, will vary according to the prior political culture in a state, the structure of statewide interest groups, and other state factors. Political theory, he says, provides no precise prescriptive or normative solutions for the optimal governance structures.

Experience of CBTE programs to date does not look promising; some directors indicate that the most troublesome aspects of program development lie in its politics! The study of 17 operating programs previously discussed confirms this:

> Working collaboratively and sharing power was not simple, and institutions did not willingly and easily give up their traditional power and roles...Collaboration between university and public schools was uncommon, alien to the participants, and difficult to establish. This explained the few viable partnerships actually observable.[50]

Even while pointing to these difficulties, however, CBTE advocates seem to have faith that "cooperative processes for problem solving" will emerge. Little attention is given to strategies for achieving the necessary cooperation between conflicting factions with widely divergent value systems.

The problems of even achieving consensus on educational goals are well known. Few school districts in the United States have defined clearly and in detail what their objectives are. Perhaps the difficulty is best illustrated by a document prepared by the State Education Accountability Repository.[51] This agency was funded by USOE to obtain statements of purpose from all states against which educational attainments can be measured and evaluated. Thirty-five states responded to the request. However, the responses were ambiguous and varied widely.

## Certification Procedures

Assuming that the competencies, instructional modules, and assessment tools were developed, the question arises as to who will perform the evaluation and collect the evidence verifying candidates' ability to perform. This question is the focus of another major CBTE dispute. Smith observes:

> It is axiomatic that training institutions cannot be persuaded to form their programs by specifying criteria for certification as long as these same institutions are themselves allowed to decide whether or not their products meet the criteria. If the movement is to have any chance to succeed, the initial certification of a teacher must be based upon an evaluation made independently of the institution that gave the training.[52]

There is resistance to this idea, however. The California Council on the Education of Teachers recently adopted a resolution opposing any CBTE programs and evaluation mandated from the state level. Since evaluation is costly for a licensing authority to undertake, responsibility is likely to be placed on the training institutions.

Smith further argues that there is no point in state after state developing its own measures of basic skills and behaviors; instead of such a diverse effort, which would make reciprocal certification difficult to justify, a national plan should be worked out to develop a catalog of

skills and behaviors. When one examines the documents of the State Education Accountability Repository referred to earlier, it can safely be assumed that uniformity between states might be enormously difficult to achieve. The trend to revenue sharing will only accentuate the diversity between states. Too, one can speculate that new charges of federal control would be aimed at such an effort. The Education Speciality boards for extra-legel certification recommended by the Committee on National Program Priorities would be subject to similar attacks.

Among CBTE developers, there seems to be a lack of recognition of the possibility that non-school factors may affect student achievement more strongly than any educational efforts. Those in opposition to the CBTE doctrine quickly point out that no one should be held responsible for an outcome unless he knows and is responsible for the factors that shape it. Smith observes that "medical doctors are not licensed because of their ability to cure a percentage of their patients, nor are lawyers licensed because they can guarantee justice for a certain proportion of their clients.[53]

Premature Legislation

A major concern of CBTE advocates is that resistance from both classroom teachers and education college faculty may be created through hasty and inappropriate legislation on certification based on CBTE standards.

Important issues are certain to arise with respect to recertification of inservice teachers under the CBTE doctrine. There could well be an avalanche of due process claims from teachers denied recertification. A civil rights lawyer says that CBTE can be used as a screening device to eliminate minority group teachers. If so, school districts can expect challenges by civil rights claimants. He expressed concern that competency-based certification could be used to dismiss ethnic teachers, citing the

case of southern school districts where, under court-ordered desegregation, a large number of black teachers were discharged on grounds of incompetency. Civil rights lawyers, he claims, will be watching CBTE very closely.[54]

## Organized Opposition

The strongest opposition is coming from the teacher unions. Although the American Federation of Teachers (AFT) has not yet taken an official stand, one of its representatives speaks of CBTE's "troubling aspects and ominous implications." AFT feels that teachers should continue to be certified in the traditional way until CBTE has been proven through research.

The United Federation of Teachers (UFT) has taken an official position. Struck by the primitive state of research into the teaching process, the UFT Committee on Performance Certification recommended that "UFT oppose any attempts to institute performance certification before the completion of validated research."[55] Expressing a willingness to cooperate in the necessary research and development, the UFT adopted all its committee's recommendations.

Although NEA has denounced accountability as "educational fascism,"[56] it has not taken a position on CBTE but appears to be watching and waiting for developments. A major priority of the NEA and many of its affiliates, of course, is to create a professional governance for the teaching profession that provides for direct involvement of teachers in design and planning. In fact, the NEA recently completed a "first of its kind" study[57] to explore the potential for teacher involvement in reforming inservice education. The project's first phase, conducted in four sites, defined the steps for deciding what reforms should be undertaken; models of schools were developed with input from both students and parents.

As yet, there appears to be little real involvement of public school teachers in the design and governance of CBTE programs, and some concern has been expressed about the capabilities of classroom teachers for the kind of demanding and creative development required if CBTE is to achieve its potential. Especially is this true if CBTE is to be responsive to the demands of the humanists for development of reliable affective measures.

## Development and Operating Costs of CBTE

Initially, the planning activities of the Committee on National Program Priorities provided for the development of a cost analysis. Unfortunately, time did not permit such analysis by the committee, and only tentative cost estimates were prepared by individual committee members. Hence, no reliable information on the cost of adopting CBTE programs has been available, and directors differ in their opinions. Some say the initial development costs are not extensive, but operating costs are prohibitive (e.g., no funds are available to obtain released time for public school teachers to participate in planning and development work). Others report that operating a CBTE program is not as expensive as developing one, although operating costs are more than for traditional programs.

Little funding for module development is available, and most education professors are reluctant to use modules unless they have developed them. Directors report that if these professors could be reimbursed it might be an incentive for increased involvement.

## Exportability

The preceding discussion has pointed to the extreme complexity of the CBTE movement, and to the difficulty in achieving any kind of uniformity between programs. No two programs examined are alike; full implementation of a CBTE program has not been achieved in any teacher college.

Although the original USOE specifications for model proposals called for exportability as a characteristic, this was not feasible. As one guide designed to assist new CBTE adopters states:

> Every institution must go through the process of designing its own approach. Programs which have different basic assumptions about the role of the teacher will certainly function in different ways and produce teachers who operate in different ways.[58]

The results of a conference of the California Council on the Education of Teachers, at which educators received directions for implementing CBTE type programs, demonstrated the problem here. Given complex guidelines and having little understanding of what was expected, most seemed more interested in how to fill out the new forms properly than in how to develop creative programs. The same situation was noted by UFT Vice-President Sandra Feldman in New York.[59] If institutions of teacher training are left to be the certifying agencies, as they are insisting, there's a good chance the forms outlining their plans for competency-based programs will be filled out correctly--but they may well be "old wine in new wineskins."

Indeed, many CBTE proponents fear that traditional teaching will continue and be called "competency-based" without effecting any real change. There are conflicting perspectives even among the advocates as to what is really new and different about the competency-based approach. Some say what's new is the explicitness of the teacher competencies. Others see CBTE as radically different, in opposition to every aspect of traditional teaching. Still others say its not at all revolutionary--it actually started with the instructional reform movement of the 1950s. One college of education dean put it this way:

> I think there's a danger in overly high expectations. Like most "new" ideas, CBTE is getting lots of publicity and is being touted as a new invention when in reality it may be only rediscovery. There have been elements of competency-based training in all teacher education.[60]

## IV A COMPARISON WITH HISTORICAL ANTECEDENTS

> Even historians--God bless 'em--can help in this process. We've been ignored in recent years, and no wonder; the change models of industry and the Defense Department held sway, and what could historians do with these but to carp at them? A wise educational policy will use the past with all its complexity, rather than ignore it.[61]
>
> Theodore Sizer, 1972

An exhaustive analysis of the CBTE movement might trace its genesis to Quintilian (35-100 A.D.) who came nearer than anyone else before him to writing a manual for teachers. In Quintilian's approach, we see perhaps the first glimmers of two major emphases of the current CBTE movement: (1) individualized instruction, and (2) time in module and course completion as a variable.[62]

The indictment of the Roman philosopher Seneca (4 B.C.-65 A.D.) that teachers were far removed from life also sounds suspiciously akin to CBTE's stress on field-centered instruction.[63] Suffice it to say that the search for competent teachers is an ancient one.

In American educational history, the first action toward professionalization came from the teachers themselves; in 1794, the Society of Associated Teachers was formed with the goal of establishing qualifications for the occupation. By the time of the Civil War, most states had passed requirements governing the examination of teachers, certifying on the basis of an oral examination. This practice, stemming from an earlier period when clergymen asked questions of applicants for teaching positions, perhaps came closer to a competency-based approach than the written examinations used today.

A leap forward in the profession was taken when NEA was formed in 1857. Certainly the history of this organization's activities has been marked by numerous attempts to define teacher competency.

## The Systems Management Era

The move to a systems management approach to competency had its roots in the late 19th century. Prior to that period, academic revulsion at the world of commerce was often reflected in the writing of educators. For example, one manual for teachers written in 1856 exhorted the profession to avoid "the deceptions of the business community":

> To do well in the world, and exert the greatest amount of influence, the instructor should possess a familiar knowledge of general affairs. He should know something of the business community, with its various devices, tricks, and deceptions, that he may impart to his pupils a suitable degree of cautious prudence, to prepare them properly to encounter the temptations and treacherous arts which they will surely meet when they take their stand on life's busy stage.[64]

By the 1900s, however, the American public was developing an increasing respect for the businessman's values and practices, as epitomized by such successful industrial giants as Carnegie and Rockefeller. This growing influence coupled with the reform movement spearheaded by the muckraking journalists of the day primarily contributed to the introduction of systems management in education.

There is remarkable similarity to the contemporary scene in the general societal conditions in which the systems approach took root; the following paragraph describes the social context of the scientific management movement in the early 1900s:

> This movement (scientific management) was primarily an attempt to cope with the problems which were a product of rapid industrialization: the consolidation of industry and the concentration of wealth; the ruthless exploitation of the country's natural resources; the corruption and inefficiency in government;

> the tremendous growth of cities; the flood of immigrants who added to the complexity of the social and political problems in the urban areas; and finally, the fear among the middle class that America would react to these problems in an extreme or radical way.[65]

Every aspect of American life came under attack by the muckraking journalists as they stirred the public to clamor for change. The power of public opinion was felt increasingly, extending to education by about 1910. From 1911-1913 articles complaining about the schools appeared monthly in both the popular and professional journals. One series contained the criticisms of leading educators, including the following indictment by a Dean from Denver who blamed the inefficiency of the school system for society's ills:

> The people have changed but not the system; it has grown antiquated and will not meet our present needs; it has indeed become a positive detriment and is producing a type of character which is not fit to meet virtuously the temptations and the exigencies of modern life. The crime which stalks unblushingly through the land; the want of responsibility which defames our social honor; the appalling frequency of divorce; the utter lack of self-control; are all traceable to its (the school system's) one great and crying defect--inefficiency.[66]

Thus, educators--reflecting their vulnerability to public opinion and pressure--began adopting the efficiency techniques of industry and a reform-minded public connected these with progress and change. And as the concepts of scientific management were applied to the selection and training of teachers, many of the same problems emerged as today face the developers of CBTE.

## Development of Explicit Competencies

Many leading educators of the era (e.g., Cubberley, Spaulding) were part of the movement to apply scientific management techniques to education. One of these was Franklin Bobbitt, instructor in educational

administration at the University of Chicago. In 1912, he developed principles for the training of teachers corresponding to those designed by Frederick Taylor, recognized leader of the scientific management movement in industry:

> Preservice: The management must train its workers previous to service in the measure demanded by its standard qualifications, or it must set up entrance requirements of so specific and detailed a nature as to enforce upon training institutions the output of a supply of workers possessing the desirable qualifications in the degree necessary for entrance into service.
>
> Inservice: The worker must be kept up to standard qualifications for his kind of work during his entire service.[87]

Bobbitt felt that to define standards one must first go into the world and make a careful survey of community needs; the world could not expect "to get a good product until it defines what it needs in specific terms." Once this was done, he felt it would be relatively simple to develop low level standards, claiming that "after our profession has scaled the lower heights, it will be time enough to prepare to scale the higher."[88]

## Design by Consortia

As in the current CBTE movement, Bobbitt emphasized that the public schools must be involved in the development of teacher competencies. Since teachers were coming out of teacher training institutions poorly prepared and school supervisors had to spend time in bringing them up to standard, the schools had the right to inform the colleges what their needs were. As Bobbitt put it:

> They have the same right to say to colleges what product should be sent to them as a transportation system has to say to a steel plant what kind of rails shall be sent to it. They are in a position to command.[89]

Bobbitt adapted the idea of the advisory committee from industry, although admitting that certain departments of the university would resist this intrusion on their domain. He recognized the inherent difficulties, stating that school officials were not even agreed among themselves on the necessary standard qualifications. But even when there was agreement he complained that the terms in which the competencies were expressed were too general for practical use, insisting that formulation of explicit competencies was essential.

Bobbitt thought the profession was maturing, that "empirical vagueness and uncertainty" would give place to "absolute certainty." He believed the greatest obstacle was not the difficulty of the task or the lack of technique but "a scheme of cooperation among educators." He recognized the task would require the "self-sacrifice" of thousands of educators. But his faith in the ability of educators to place social service above "intellectual individualism" was complete: "In our field many such men are now ready, and the time is ripe."

Bobbitt also felt that the increased efficiency gained through the scientific management approach would have great rewards for the teacher:

> It appears possible so to speed up the work that one teacher may be able to handle two shifts of pupils in academic subjects during a six-hour day with not more than two hours required for daily preparation. The teacher may then be told that the remaining four hours of the day not needed for sleep and meals may be used for the variety of necessary humanizing activities for keeping one's self up to standard.[70]

Research and Evaluation

In Bobbitt's time the behavioral sciences were in their infancy. Whether in this regard a parallel to 1973 can be drawn is an open question. What is significant, however, and to some extent analogous to the

current movement, is Bobbitt's lack of understanding of the nature and complexity of the task. As Callahan points out:

> It is doubtful that even a man of Thorndike's ability and research experience, with limited time and money, could have done on a truly scientific basis, what Bobbitt expected the supervisory staff in the public schools to do.[71]

Numerous attempts to rate teacher competency were made in this era. The importance the profession attached to this problem is seen in the 1913 yearbook of the National Society for the Study of Education, which was devoted to the study of teacher efficiency. One Department of Education professor at the University of Chicago devised a rating scale which was used as a model for the many others that were produced at the time[72] (excerpts are shown later in Table 2).

Forms of Resistance

A few prophetic voices endeavored to point to the overzealous nature of the 1912 proponents of a competency-based approach and to the oversimplification of the activity that was being carried on. Although believing the movement held great promise for education, both John Dewey and William C. Bagley cautioned that much of the work was superficial and merely the same old education "masquerading in the name of science." Bagley pleaded repeatedly for "patient, painstaking, sober, and systematic investigation."[73]

As one might expect, there was also lack of faculty cooperation and opposition from teachers who expressed widespread dissatisfaction with the use of rating scales. However, except in urban areas like New York and Chicago, there was no organized opposition comparable in strength to today's professional associations. One strong voice of protest, however, appeared in the American Teacher, the official journal of the American Federation of Teachers. It bears remarkable similarity to a recent

statement appearing in the January 10, 1973 edition of Education Daily which clearly spells out the National Education Association's posture on accountability:

| 1912<br>American Federation of Teachers[74] | 1973<br>National Education Association[75] |
|---|---|
| The organization and the methods of the schools have taken on the form of those commercial enterprises that distinguish our economic life. | The accountability movement is a "warped attempt" to apply corporate management systems models to education. |
| We have yielded to the arrogance of "big business men" and have accepted their criteria of efficiency at their own valuation. We have consented to measure the results of educational efforts in terms of price and product. | Governments and private citizens must be made aware that children are not "products" and that education is not a cause and effect process. |
| Education must measure its efficiency in terms of increased humanism, increased power to do, increased capacity to appreciate. | The emphasis accountability places on measurable skills such as reading and math ignores the important objectives of personality development, creativity and socialization. |

## Diffusion

The prestige of such educational figures as Bobbitt, Spaulding, and Cubberley provided leadership for the scientific movement for many years following. Between 1915 and 1929, thousands of young men trained in the systems approach to education went into classrooms or administrative positions to further disseminate scientific methods and efficiency.

According to Callahan, USOE also provided leadership in disseminating information about the techniques of scientific management:

> In this descent into trivia administrators were given leadership by the United States Commissioner of Education, William James Cooper.[76]

## The Commonwealth Teacher Training Study

The 1920s produced at least one major attempt to be responsive to Bagley's pleas for "painstaking and systematic investigation." Two University of Chicago professors--W. W. Charters and Douglas Waples--headed a monumental research effort, The Commonwealth Teacher Training Study, commonly known as activity analysis. Launched in 1926, the three-year program was designed to "develop a comprehensive description of the duties and traits of teachers that might provide the necessary basis for determining systematically what teachers should be taught." As Charters described it, education was now in its fourth stage--definition:

> The standardizing movement has represented a great reform. As the result of it, phenomenal improvement in almost every form of professional education has taken place within the last quarter-century.... It has inevitably led us into the fourth (definition). Standards cannot be enforced unless they are defined. If the standards are to be precise, however, they must be based on renewed and searching study of the educational process they are designed to regulate.[77]

It was indeed a "searching study"; no fewer than 236,655 specific statements of teacher activities were assembled. Approximately 12,000 of these activities were grouped into seven primary "divisions," then classified further into "subdivisions, sections, and subsections, with occasional extensions in the form of secondary subsections." The example presented on the following page indicates some confusion in the format of the original. Other competencies as defined by Charters and Waples are shown later in Table 2.

Unfortunately, as in the present CBTE movement, exportability was a problem. Lack of time and funding prevented the investigators from going beyond preparation of the activity master list, with a comparison and evaluation of the activities in respect to their importance and difficulty. Charters and Waples had taken the position that each type of training

Extract from The Commonwealth Teacher Training Study[78]

(Division) I. Teachers' activities involved in classroom instruction

(Subdivision) A. Teaching subject matter

(Section: C. Selecting and organizing subject matter (subject matter includes information, pupil experiences, ideals, attitudes, skills, and learning activities)

(Subsection) 3. Taking account of pupils' interests, abilities, and needs

(Secondary subsection) a) Selecting subject matter with reference to pupils' interests (e.g., introducing discussion of school events, pupils' hobbies, topics suggested by pupils)

(Summary paragraph) Basing new work on common experience; enriching course taught; basing course on current problems as revealed in readings and discussions with parents and in class, on seasonal sequence, on community practices (production, marketing); selecting material with reference to individual interests; providing material within the pupils' interest, experience, understanding--which leads to new activities, which is illustrative, thought-stimulating; adapting work to child's point of view; recognizing individual interests and abilities; meeting difficulties arising from a fixed course of study; adapting to race difference; adapting pupil's reading to his experience; adapting school to outside environment of child; giving extra work for credit; encouraging originality, encouraging inventive tendencies.

school must determine its own objectives and hopefully find the activities useful for reconstructing courses.

## The California Definition of Teacher Competence

Although the diffusion of scientific management techniques in education suffered a setback with the great depression of the 1930s, the movement to find a competency base for teacher education picked up again in California in the late 1940s. Beginning in 1949 the state officially adopted a policy of CBTE as the basis for establishing certification requirements.

Concurrent with the state's policy was the work of the California Council on Teacher Education which, in 1947, began formulating a definition of the competent teacher that would portray the desired product of the teacher education program. Under the leadership of Lucien Kinney of Stanford, the Council published its study in 1953[79] and it became known as the "California Definition of Competence" (samples of competencies defined at that time are shown later in Table 2). The study was a major topic of discussion at the national conference of the AACTE in 1954, and of the NEA in 1953.[80]

## In Retrospect

This section has touched on some of the more prominent antecedents to the currently popular CBTE movement. Table 2 shows the remarkable similarities between the explicit competencies developed in these earlier periods and some of the more recent ones; only the language has changed, becoming progressively less comprehensible.

Today's parallels to the scientific management era seem obvious; some 60 years later the accountability movement stems from the same roots: (1) public criticism of the schools, and (2) the growing influence of business management systems.

As in the earlier era, expectations for the CBTE movement are high. It appears that to some extent at least the USOE promotional effort has contributed to the unrealistic expectations that surround the movement. Those turning to CBTE as a viable concept may have been led to expect something radically different from traditional methods of teacher preparation. In reality, the differences are neither major nor do they represent a new and radical departure from what has been tried before.

Much more could be said in summary. But perhaps Callahan best sums up the essence of this discussion and speaks for 1973 as he describes 1913:

> Spaulding and Bobbitt, in dressing up simple problems with impressive scientific-appearing presentations while ignoring more profound considerations, and then making extravagent claims which could not be realized, helped to build up professional education for a great fall. Perhaps an awareness of the difficulty of the task and of the skill and training necessary for the research work would have made the situation more difficult for them in 1913, but it would have contributed more to the study of education in the long run. Whether this awareness, if coupled with a determined effort to educate the public to the need for painstaking, systematic--and expensive--research in education would have resulted in the formulation of a real scientific basis for education is, of course, an open question. Few educators saw the need and neither the research skill nor the money was available.
>
> Under the circumstances, however, these facts were not important. Schoolmen were responding to criticism and the critics were not interested in genuine research. They wanted to reduce, or at least to prevent, an increase in school taxes and they wanted to be assured that their schools were being operated efficiently, i.e., that they were getting the maximum return for their expenditure.[81]

Table 2*

SELECTED EXPLICIT STATEMENTS OF TEACHER COMPETENCIES, 1912-1972
(Classified Under Currently Popular Headings)

| 1912 | 1928 | 1953 | 1972 A | 1972 B |
|---|---|---|---|---|
| | | **Specifying Behavioral Objectives** | | |
| Definiteness and clearness of aim | Presenting, explaining, and illustrating objectives to pupils | Leads pupils to define acceptable objectives | Develop and use behavioral objectives in curriculum planning | Assesses (diagnoses) the individual learners cognitive structure for internal organization of knowledge prior to the selection of specific behavioral objectives |
| | | **Individualizing Instruction** | | |
| Attention to individual needs | Adapting assignments to the needs of individual pupils | Provides for differentiated activities and assignments | Match instructional activities with the objectives of the lesson, capabilities and interests of the students | Selects meaningful (relevant to learner's developmental level, culture and values) instructional material and teaches for concepts, principles or generalization when these are valid options |
| | | **Motivating Pupils** | | |
| Skill in motivating work | Using interesting methods of instruction (e.g., methods to catch and hold interest and attention) | Adapts psychological principles of learning to individuals and groups in providing effective and continuing motivation | Recognize and reward approximations of the ultimate performance criteria | Uses moderate arousal, novelty and stimulation to influence development of intellectual skills, rate of learning and reduction of nonproductive disturbances |
| | | **Providing Feedback** | | |
| Skill in habit formation | Following up diagnosis (e.g., indicating means of improvement, commending good work, pointing out errors) | Employs adequate informational and diagnostic procedures | Provide a system of almost continuous feedback (both positive and negative) to students about their performance | Facilitates concept formulation by...allowing for feedback through knowledge of successful results and mistakes |

* These statements should not be taken as representative but rather as illustrative.

Sources: 1912--Reference 67; 1928--Reference 77; 1953--Reference 79; 1972A--Reference 34; and 1972B--Reference 82.

# V OUTLOOK FOR THE FUTURE

The similarities between the currently popular CBTE movement and the earlier scientific management era in education raise the question, "Is progress retrogression in disguise?" Both movements share a commitment to the management techniques of industry, both emerged from similar societal contexts and in response to public criticism. Yet some 60 years later, the major problem inherent in the earlier movement has not been resolved: a gross lack of an adequate base of knowledge and experience.

The almost overwhelming array of problems associated with the competency-based approach to teacher education calls for careful consideration of the federal role in this rapidly growing movement. CBTE has potential, but the indications are that far more problems than promise lie ahead if the present course is followed.

## The CBTE Potential

What actually is the CBTE potential? The movement has promise, if only in stimulating more analytical thinking and planning for the education of teachers and children; neither can exist in isolation. Beyond this simple fact, however, are other promising signs. CBTE forces a look at the total process of teacher education. The highly individualized nature of a CBTE program requires systematic planning of both instructional resources and faculty time; data on all phases of activity must be gathered. This could help provide the feedback needed to guide the student teacher's learning experience that has been lacking in traditional teacher education. And certainly, in terms of assessing

individual student teacher progress, the criteria-referenced nature of the program is superior to traditional, norm-referenced measurement.

CBTE could also incorporate and unify fragmented innovations, e.g, micro-teaching, computerized instruction. In fact, CBTE is seen as a prime user of the new technology. One authority claims the demands for record-keeping are so heavy that the computer may be the only efficient way of implementing CBTE ideas. He argues that to enhance teacher preparation significantly, technology must be adopted to help meet the demands of CBTE within the financial constraints.[83] This could greatly expand existing knowledge concerning effective applications of technology to the educational process.

Equally significant is CBTE's potential for breaking down the traditional division between the public schools and colleges of teacher education. Broad-based decision making is central to the notion of citizen participation in a democracy; through its consortia approach CBTE fosters a desirable trend in this direction.

CBTE's emphasis on field-centered instruction could further advance a desirable trend that developed during the past decade when it became apparent that teachers were entering real classrooms not prepared to deal with the critical learning needs of educationally disadvantaged children.

Perhaps, most importantly, CBTE can foster some needed, if fragmented, research that can take us closer to the goal of understanding and perhaps ultimately defining what competent teaching really is, and thus perhaps somewhat improve the quality of teaching. But expectations for widespread reform via CBTE must be considered totally unrealistic.

What is the major problem associated with CBTE development? The lack of empirical knowledge on teacher behavior as it relates to pupil outcomes is CBTE's biggest handicap. In most CBTE writing, there is a notable lack of a child-centered emphasis; concern with consortia,

modules, and components--yes. But the only rationale for these techniques is if they really do promote the kind of teacher competency that can improve learning for children. In actuality, the CBTE movement depends far more strongly on sheer faith that the relationships between teacher behavior and pupil outcomes will be established by future research than it does on actual evidence from existing research.

The critical issue then becomes this: unless the relationship between teacher behavior and pupil outcomes can be established, there is no sound basis for certifying teachers under the CBTE approach. Until such time as that relationship can be demonstrated, the superiority of CBTE over other teacher training methods must remain in question.

Is funding available to establish an empirical base for CBTE? Few seem willing to hazard even a guess as to the time required to establish a sound empirical base on which the CBTE movement might ultimately rest. In fact, the present study uncovered only two such estimates. The proposal by the Education Testing Service for establishing a National Commission on CBTE roughly projects a ten-year time span:

> The Coordinating Committee has drafted a preliminary ten-year plan with specific goals for each year. It expects to have resolved the major problems of the movement by that time and to have model programs in operation. These estimates are generally conservative, however, and the timetable will be accelerated wherever possible.[84]

The New York State Regents are more definite. Speaking of the plan for meeting the goal that will require certificate holders to maintain demonstrated competence, the Regents assert:

> This step in the achievement of the goal should be fully realized after 1990. At that time, staff behaviors that positively affect pupil performance will have been validated and should become the focus for the periodic assessment requirement.[85]

Most researchers, however, refuse to venture such an estimate, stating only that to achieve this optimal state would require a massive investment of time and money.

A major irony of the CBTE movement is that it has emerged--with its demand for heavy research funding--in an era of increasingly tight fiscal controls. Current budget projections reflect severe cutbacks in federal funds for developing the education professions: in 1973, a 20 percent decrease; and in 1974, almost a 50 percent decrease from the 1972 appropriation.[86] Although outlays for educational research are anticipated to rise by 41 percent over their 1972 level, the R&D budget for education professions development shows a 38 percent decrease by 1974.[87] As nearly as can be determined at this time, these reductions have been projected on the basis of an alleged teacher surplus.

The lack of a major prior commitment by USOE to research on the relationship between teacher behavior and pupil outcomes does not encourage optimism for a major future commitment in this direction, especially in an era of declining funds for education generally. It also seems unwise to assume that agencies outside the federal government will invest heavily in this research.

Is the required research skill available? Here again the outlook is not promising. Undoubtedly, the profession has matured since the first era of scientific management and perhaps what was not possible 60 years ago in Bobbitt's time may be today. Yet, when one examines the historical comparison of competencies (presented earlier in Table 2), one finds little reason for optimism. Only the language has changed.

Since the CBTE approach espouses the involvement of public school teachers in the design of CBTE programs, and since professional associations are strongly urging this involvement, teacher capabilities to

perform the required developmental effort must be assessed. Unfortunately, the evidence is not encouraging for the kind of creativity that is essential if CBTE is not to slip into modularized mediocrity.

NCES data[88] indicate that on the average non-education majors perform consistently better than do elementary teaching majors on standardized aptitude tests, supporting the Coleman data which also indicate that future teachers generally were surpassed by future non-teachers in tests of non-verbal reasoning, mathematics, science, and social sciences.[89] Chris Argyris, as quoted by Sizer, has argued that change will occur in an organization only when its key members have the technical ability to create and handle new roles. Sizer claims that all too few teachers have either an attitude favorable to change or the knowledge to carry it off; the profession, he claims, is technically incompetent.[90] And speaking of a typical undergraduate group of education students, Vernon states:

> Scientific ideas and approaches are so foreign and remote from the thinking of much of this subculture that one can hardly expect the work of the scientist to have any real impact on it.[91]

If the expectation is to obtain a higher level of creativity through enrollment of a more imaginative generation of student teachers, one must consider the fact that many of these students--infused with more socially activistic orientations than their predecessors--may not opt for CBTE.

How does CBTE fit present national priorities? On the surface at least, it appears that CBTE is consistent with the national focus on educationally disadvantaged children. The three NCIES programs that remain in the 1974 projected budget--Teacher Corps, Urban/Rural, Career Opportunities--are targeted at poverty children and all are requested to incorporate a CBTE component in 1973.

What is in question, however, is the extent to which the CBTE approach of specifying explicit behavioral objectives and teacher competencies can take into account the psychosocial and environmental factors that impinge on child learning. Is it possible to define teaching performance apart from the specific system of behaviors and values that are inculcated in a particular neighborhood or cultural setting? CBTE advocates insist that such programs as Teacher Corps are providing a cultural context in which these competencies can be developed and tested. The danger appears to lie in premature certification of teachers on the basis of demonstrated performance in affective areas for which we have few if any reliable measures.

A major inconsistency in federal concern for the education professions is that budget cuts made on the basis of an alleged teacher surplus imply a future concentration on inservice training; the major CBTE effort has been directed to preservice training.

How does CBTE fit the public's view? Although extensive writings on public dissatisfaction with the educational process have appeared, the extent and nature of this dissatisfaction was never studied systematically until a series of annual Gallup polls was conducted.[92] These four assessments (1969-72) provide some interesting findings about the attitudes of the public toward its schools.

Surprisingly, the surveys indicate overall public satisfaction with the educational status quo. They suggest general satisfaction with teachers. For example, when the respondents were asked what was particularly good about their schools, teachers were consistently mentioned most often, slipping to second place in only the fourth year of the survey. Nevertheless, in 1970 over two-thirds favored a system that would hold teachers more accountable for student progress, while almost half opted for performance contracting in 1971.

Innovation and reform are of little interest; in 1971, only about one-fourth of the Gallup respondents thought there was "not enough innovation." Finances are of primary interest, climbing from third place in 1970 to first place in 1971 as the biggest problem with which the public schools must deal; in 1972, it was second in order only to discipline.

These findings, taken together, seem to suggest that the American public, relatively satisfied with the status quo, is demanding more results for the educational dollars and perceives accountability as one way to achieve this without changing anything.

Far more significant, however, is the public's admitted lack of knowledge about the educational process. In 1969, more than four in ten of Gallup's respondents admitted they knew "very little" about their schools. And a generally low level of sophistication was indicated by descriptions of what was meant by a "qualified teacher." Perhaps even more important is the public's expressed desire to have more information. Two-thirds of the 1969 respondents said they would like to know more about the schools, expressing great interest in the nature of the educational process as distinct from information about organization and facilities.

These findings suggest that if the CBTE promotion continues to build as it has in the past, a naive public may soon expect teacher colleges to be training teachers to levels of competence that will produce desirable learning outcomes in children. As Arthur Combs says, it all sounds simple:

> Unfortunately, the behavioral objectives approach sounds infallible to the lay public, to industrialists, businessmen, and legislators. To them, ... the performance-based criteria approach seems like the perfect solution to education's problems.[93]

## Probable Outcomes

If the present course is pursued, what are the likely outcomes for the CBTE movement? Pressures for accountability will probably continue to dominate the actions of the federal bureaucracy. Unaware of the realities of the educational process, a largely uninformed public will continue to clamor for accountability. Cost-conscious legislators will rush into CBTE without allocating sufficient developmental funds to their institutions of teacher education. If, as seems probable at the present time, recertification of inservice teachers is emphasized to help alleviate the alleged teacher surplus, there will be increasingly strong resistance from professional associations.

There is a danger of eventual disillusionment and abandonment of the CBTE approach; it could ultimately be legislated out of existence. There could be extreme criticism of large expenditures of public funds in yet another reform effort. If the present infatuation with CBTE continues, the future of CBTE might well be that described by Combs:

> Professional educators should know better. If they permit this distorted view to prevail unchallenged as the primary approach to educational accountability, they will have failed everyone: themselves, the schools, society, but most of all a generation of students who will have to live out the consequences.[94]

# VI IMPLICATIONS FOR POLICY

> A government official responsible for the development of policies must start this task by taking into account the governing statutes, the realities of budget and the budgetary process, and the existing policies in the higher levels of the Executive branch. Any conclusions he may reach that are at variance with these realities--however perceptive, however sound they may be--cannot be taken into account in formulating policy. This, after all, is a basic condition of orderly government.[95]

Since CBTE represents for the moment at least a major thrust of USOE, a decision needs to be reached soon on whether this approach to teacher training warrants a further investment of federal funds. Working in an increasingly cost-conscious climate, some federal proponents of the CBTE approach may have assumed CBTE is a cost-effective method for improving teacher quality and hence the entire educational process. In reality, if CBTE is to measure up to the claims being made for it, a massive investment of federal funds would be required over a period of years. Indications are that federal funding for the CBTE approach in part rests on its congruence with existing policies in higher levels of the Executive branch. CBTE--with its emphasis on behavioral objectives and systems management--appears consistent with an administrative move to accountability on all fronts. CBTE's congruence with the federal emphasis on educationally disadvantaged children, however, remains in question.

It seems obvious that a priority item for federal decision-makers is to develop a coherent policy regarding the federal role in the CBTE movement. Such policy should be based on a critical evaluation of its problems

and potential. The study of CBTE which this paper represents has led to some suggestions that USOE may wish to consider in framing a more comprehensive policy regarding CBTE.

Recommendations on Immediate Steps

(1) Whatever decisions USOE may ultimately reach regarding its role in the CBTE movement, for the present the claims made for widespread educational reform through this approach to teacher training should be moderated.

(2) Given the present state of the art in CBTE, legislation that would mandate certification and recertification of teachers on the basis of demonstrated outcomes with pupils should be discouraged.

Recommendations for Long Term Planning

Beyond the suggestions for immediate action, USOE might consider incorporating the following into its longer range planning:

(1) Apply funds to a comprehensive analysis--It would be wise to consider the desirability of using a portion of federal funds for a more objective appraisal of the CBTE approach than has heretofore been undertaken. Present developmental funding should remain intact while such an investigation is underwway. The important issue is that while further investigation is in progress, any attempts at basing certification of teachers on the criteria of pupil outcomes developed to date should be opposed.

(2) Establish an independent policy panel--The feasibility of establishing a policy panel along the lines recommended by the National Advisory Council to Education Professions Development (NACEPD) should be explored. Since both the internal USOE Task Force '72 and the external Committee on National Program Priorities in Teacher Education appear to be strongly committed to the CBTE approach, it might be very desirable to form a more objective policy group. This group could be established for a relatively short period specifically to redirect as necessary USOE's current CBTE efforts.

Such an independent panel could be made up of recognized top-flight educators and researchers, as well as members of professional associations and laymen. Talent from the enormous experience represented by the National Consortium of CBTE Developers should be included so as to draw on the knowledge gained from the several years and millions of dollars invested in the development of CBTE. Equally important would be the inclusion of those who to date have been in opposition to the CBTE movement.

NACEPD estimates the initial cost of establishing such a panel to be in the neighborhood of $40,000. In relation to the over $12 million already spent on development, such an expense seems warranted. A policy panel of this nature could function as an advisory group to federal planners in pursuing some of the policy suggestions that follow.

(3) Promote research--Consideration should be given to transferring the CBTE effort to the National Institute of Education (NIE)

Directors of the Elementary Models project have long been advocating that CBTE be brought back into its original research framework; CBTE projects, they insist, do provide a natural context for research in such areas as on training effectiveness, management and instructional systems, and strategies for overcoming problems of consortia.

The policy panel could work closely with NIE in establishing research priorities. The need is not for simply "more research," but for program-focused studies that deal with critical issues according to priorities. An obvious first step--but one that has been avoided to date--is to specify clearly what R&D must be accomplished prior to any large-scale CBTE dissemination effort.

The most critical need of the CBTE approach is research on the relationship of teacher behavior to pupil outcomes. Whether CBTE continues as a major thrust or fades into the background, such research is of very high priority.

The panel should also encourage the development of broad-based research as well as that specifically focused on the relationship between teacher behavior and pupil outcomes. The relationship between teacher behavior and pupil outcomes cannot be understood until we have expanded the knowledge concerning the social and environmental factors that impinge on child learning. In the absence of such knowledge, methods of training teachers for the educationally disadvantaged will probably remain largely ineffectual:

> A basically new strategy for attaining the objectives of compensatory education is required if they are ever to be reached. This strategy should assume that the assumptions behind current programs are wrong.

> Compensatory education objectives cannot be achieved in the classroom alone; rather, a total environmental approach is required. The time has come for educators to acknowledge this reality and structure their activities to complement broader societal efforts if they are to achieve even narrow educational objectives.[96]

Attempts should be made at the National Center for Educational Statistics to gather new types of data on the education professions. A clearer understanding of the complex concepts of supply, demand, and need is required to answer such questions as: are resources spent on experienced teachers more likely to yield returns in the classroom than those spent on teachers in preservice training?

If teacher training is ever to be consistent with the national focus on the educationally disadvantaged, information should be gathered in a far more targeted way. The UPEP Study Commission's thinking about information gathering theory and measurement should be examined.

> Undergraduate manpower statistics need to be gathered in a much more targeted way than they have been--in ways which will represent what local power structure configurations, local community patterns, and local cultural needs are and how each of these bears on the education and placement of education personnel. The recognition of the unmet needs of students in present schools and the creation of a new view of what future schools should become are both considerations vital to any future teacher supply analysis.[97]

(4) Coordinate program knowledge--Knowledge gained from other programs that incorporate teacher training should be accumulated and analyzed. It seems critical to assess the knowledge gained about teacher training through Title I experience. For example, NCIES could glean information about promising approaches to

training teachers for the educationally disadvantaged from the experience of the educational sponsors in the national Follow Through experiment.

All of the 22 Follow Through sponsors who set up innovative models of education for economically disadvantages children in kindergarten through grade 3 had teacher training components. Some focused on training aspects more intensively than others, of course. Since part of the experiment was to determine to what extent change could be effected in experienced classroom teachers, the emphasis was on inservice training. This seems particularly relevant given what appears to be an intensifying focus on inservice training.

The experience of the state of California--often a forerunner in education--should be monitored. The state education code has mandated that

> ...by July 1, 1974 each California school in which 25 percent or more of the students are of diverse ethnic backgrounds shall provide an inservice program designed to prepare teachers and other school service personnel to understand and effectively relate to the history, culture and current problems of their environment.[98]

(5) Examine alternative models--Although the former Teaching Centers of the Elementary Models projects have been renamed "CBE Centers," and will be developed as such, an experimental design appears to be lacking. It is difficult to see how these developmental centers can provide policy makers with information on whether CBTE works unless it can be shown that CBTE is cost-effective relative to other reforms. USOE could consider setting up alternative models as suggested by Barro.[99]

(6) Communicate with the public--The historical pattern of contriving innovations in response to perceived public pressure is no

substitute for substantive public knowledge regarding the realities of the educational process. Future opinion polls should seek to elicit informed public judgments, e.g., analysis of opinions about accountability should be based on an identified level of knowledge and understanding of its realities. And perhaps it is time that the mystique of the researcher's expertise, perpetuated by many social scientists, gave way to an honest admission that there are great gaps in our knowledge about the educational process, that the tools of educational measurement are still relatively crude.

The policy-making process itself should be increasingly opened to the public. Demands for this are coming from many fronts, including the National Advisory Council on Education Professions Development:

> Increasingly, policies related to the training of educational personnel will have the most profound effects on the society. It is imperative that the individuals and institutions affected have the means to shape, or at least to react to, these policies. This means that the issues involved must be treated with such clarity and comprehensiveness that an intelligent judgment can be made. The response of the public to federal policies is often determined by the degree of ignorance about formulation, it will be much easier for those affected by the programs to interact and to convey their views to those responsible for administering the programs.[100]

(7) Consider the future societal context--Efforts of the suggested policy panel and USOE in general should be coordinated with any ongoing analyses of the societal context that may influence teacher training in the future. This task would require the ultimate in creative thinking applied to such questions as:

- What are the social forces that will be changing traditional belief systems about teaching and the training of teachers?

- What are the similarities and differences between the CBTE concepts of future teacher training centers and those of the UPEP Study Commission?

UPEP, for example, talks about the orientation of future training programs in this way:

> We assume that future teachers will perform a broad range of human services. They may work in the streets, in jails, in hospitals, in industrial settings. And they will work with various age groups. Thus sites for teacher education must be varied, and open to many alternatives. It is essential that these sites include cultural settings outside the mainstream of American life.[101]

(8) Clarify educational goals--So much has been written about the need to clarify national goals for education and the difficulties inherent in this task that it seems redundant to suggest once more the importance of the task. Shane says goal-setting is our most pressing national priority.[102] Silberman agrees, although he notes the reticence of many to deal with this task which seems central to any theory of reform of teacher education.[103]

Harvey maintains that setting goals, and defining the means of attainment and the criteria by which they are evaluated, depend on a clear resolution of the question, "Education for what?"[104]

Perhaps USOE needs to more clearly define how the competency-based approach to teacher education relates to the following future-oriented questions:

- What kind of world awaits tomarrow's adults?
- What kind of skills do children need to live comfortably in this world?
- What kind of teachers are needed to impart these skills?

- Hence, what kind of teacher training is required?
- How can teacher education best accommodate to both the humanistic and technological requirements of tomorrow?

Critics of CBTE are saying that the rapidity of change makes the specifications of "right" behaviors for tomorrow's youth very problematic. A narrowly focused behavioral objectives approach therefore becomes increasingly less suitable. There is in fact a discernible trend away from this approach as evidenced in the writings of London, for example, who predicts an end of the ideology of behavioral modification. London claims the entire field of psychology has been moving in this direction during the past few years.[105] If true, this influence will increasingly be felt in the educational arena. Consideration of such trends should be an integral part of policy-making.

The study of the education professions for fiscal year 1974-75, as outlined in the recent Office of Education's Request for Proposal No. 73-20, will almost certainly identify CBTE as a priority issue. The trend analysis and other approaches that study will take should greatly assist USOE in acquiring the type of predictive information it needs as a framework for future policy making.

In the formulation of policy regarding CBTE, the Office of Education has a chance to reverse the historic pattern of overselling innovation in response to public pressure. The challenges posed by the competency-based approach to teacher education are enormous. But they must be answered if the focus on the teaching profession as a vehicle for educational reform continues. Federal involvement in the field of teacher training is of relatively recent origin; few precedents have been set. Within the constraints of budgetary realities and executive policies, USOE could test

a new approach to policy making. If the opportunity is not taken, it appears likely that, ultimately, competency-based teacher education will simply echo past exercises in futility.

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4. National Education Association, Estimates of School Statistics, 1972-73.

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8. H. Broudy, "A Critique of Performance-Based Teacher Education," American Association for Colleges of Teacher Education, Washington, D.C., p. 1 (May 1972).

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10. The institutions were Columbia University Teachers College, Florida State University, University of Georgia, University of Massachusetts, Michigan State University, Northwest Regional Laboratory, Consortium of the State Universities of Ohio, University of Pittsburgh, Syracuse University, and the University of Wisconsin. See, for example, S. C. Clarke, "The Story of Elementary Education Models," Journal of Teacher Education, Vol. XX, No. 3, pp. 283-293 (Fall 1969).

11. This Bureau was set up to administer programs established under the Education Professions Development Act (P.L. 90-35), enacted in 1967 as a series of amendments to Title V of the Higher Education Act of 1965, and to Title XI of the National Defense Education Act of 1958.

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17. EPDA programs:
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    Teacher Corps
    Early Childhood
    Educational Leadership
    Vocational Education Personnel
    Teacher Development for Desegregating Schools
    Urban/Rural School Development
    Career Opportunities
    Special Education
    School Personnel Utilization
    Training of Teacher Trainers

18. See P. Olson, L. Freeman, and J. Bowman, Education for 1984 and After, University of Nebraska, January 1972; and Olson, et al., The University Can't Train Teachers, University of Nebraska (June 1972).

19. Table 3 was constructed with the assistance of R. Hall of OPBE and A. Schmieder of NCIES.

20. Educational Testing Service, "A National Commission on Performance-Based Education: Its Feasibility, Proposed Organization, and Program" (December 1972).

21. A. Schmieder, "Competency-Based Education: The State of the Scene," op. cit., p. 10.

22. "New York State Master Plan," PBTE Newsletter, Vol. 1, No. 4 (November 1972).

23. The papers published by the AACTE committee are (by PBTE Series No.):

    1 "Performance-Based Teacher Education: What is the State of the Art," by Stanley Elam (December 1971)

    2 "The Individualized, Competency-Based System of Teacher Education at Weber State College," by Caseel Burke (March 1972)

    3 "Manchester Interview: Competency-Based Teacher Education and Certification," by Theodore Andrews (April 1972)

    4 "A Critique of Performance-Based Teacher Education," by Harry Broudy (Reference 8 above)

    5 "Competency-Based Teacher Education: A Scenario," by James Cooper and Wilford Weber (June 1972)

    6 "Changing Teacher Education in a Large Urban University," by Frederick Giles and Clifford Foster (July 1972)

    7 "Performance-Based Teacher Education: An Annotated Bibliography," by the National Committee (August 1972)

    8 "Performance-Based Teacher Education Programs: A Comparative Description," by Iris Elfenbein (October 1972)

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